



PTO/SB/08A (04-07)

Approved for use through 09/30/2007. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Complete if Known

Application Number	10/561,712
Filing Date	June 7, 2007
First Named Inventor	James M. Tour
Art Unit	1711
Examiner Name	Unknown
Attorney Docket Number	11321-P069WOUS

Sheet	1	of	10
-------	---	----	----

[illegible][illegible]

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	10/561,712
				Filing Date	June 7, 2007
				First Named Inventor	James M. Tour
				Art Unit	1711
				Examiner Name	Unknown
Sheet	2	of	10	Attorney Docket Number	11321-P069WOUS

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
/S.S./	1	Tullo, "Synthetic Rubber," Chem. & Eng. News (2003) 81, pp. 23-30	
	2	Tullo, A.H., "A Renaissance in Fluoroelastomers," Chem. & Eng. News (2002) 80, pp. 15-19	
	3	Giannelis et al., "Polymer-Silicate Nanocomposites: Model Systems for Confined Polymers and Polymer Brushes", Adv. Polym. Sci. (1999) 138, pp. 107-147	
	4	Giannelis, E.P. "Polymer Layered Silicate Nanocomposites", Adv. Mater. (1996) 8, pp. 29-35	
	5	Mark, J.E., "Some Simulations on Filler Reinforcement in Elastomers", Molecular Crystals and Liquid Crystals (2002) 374, pp. 29-38	
	6	Fu et al, "Nanoscale Reinforcement of Polyhedral Oligomeric Silsesquioxane (POSS) in Polyurethane Elastomer", Polymer International (2000) 49, pp. 437-440	
	7	LeBaron et al., "Polymer-Layered Silicate Nanocomposites: An Overview", Applied Clay Science (1999) 15, pp. 11-29	
	8	Burnside et al., "Nanostructure and Properties of Polysiloxane-Layered Silicate Nanocomposites", Journal of Polymer Science Part B-Polymer Physics (2000) 38, pp. 1595-1604	
	9	Bahr et al., "Covalent Chemistry of Single-Wall Carbon Nanotubes," J. Mater. Chem. (2002) 12, pp. 1952-1958	
/S.S./	10	Hirsch, "Functionalization of Single-Walled Carbon Nanotubes", Angew. Chem. Int. Ed. (2002) 41, pp. 1853-1859	

Examiner Signature	/Satya Sastri/	Date Considered	07/09/2009
--------------------	----------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1. Applicant's unique citation designation number (optional). 2. Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO:** Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	10/561,712
				Filing Date	June 7, 2007
				First Named Inventor	James M. Tour
				Art Unit	1711
				Examiner Name	Unknown
Sheet	3	of	10	Attorney Docket Number	11321-P069WOUS

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
/S.S./	11	Colbert, "Single-Wall Nanotubes: A New Option for Conductive Plastics and Engineering Polymers", Plastics Additives & Compounding (2003) January/February issue	
	12	Baughman et al., "Carbon Nanotubes - A Route Toward Applications", Science (2002) 297, pp. 787-792	
	13	Yakobson et al., "Nanomechanics of Carbon Tubes: Instabilities Beyond Linear Response", Phys. Rev. Lett. (1996) 76, pp. 2511-2514	
	14	Walters et al., "Elastic Strain of Freely Suspended Single-Wall Carbon Nanotubes Ropes", Appl. Phys. Lett. (1999) 74, pp. 3803-3805	
	15	Saito et al., "Physical Properties of Carbon Nanotubes", London: Imperial College Press (1998)	
	16	Salvetat et al., "Elastic and Shear Moduli of Single-Walled Carbon Nanotube Ropes", Phys. Rev. Lett. (1999) 82, pp. 944-947	
	17	Treacy et al., "Exceptionally High Young's Modulus Observed for individual Carbon Nanotubes", Nature (1996) 381, pp. 678-680	
	18	Yu et al., "Tensile Loading of Ropes of Single Wall Carbon Nanotubes and their Mechanical Properties", Phys. Rev. Lett. (2000) 84, pp. 5552-5555	
	19	Yu et al., "Strength and Breaking Mechanism of Multiwalled Carbon Nanotubes Under Tensile Load", Science (2000) 287, pp. 637-640	
/S.S./	20	Rao et al., "Diameter-Selective Raman Scattering from Vibrational Modes in Carbon Nanotubes", Science (1997) 275, pp. 187-191	

Examiner Signature	/Satya Sastri/	Date Considered	07/09/2009
--------------------	----------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>		Complete if Known			
		Application Number	10/561,712		
		Filing Date	June 7, 2007		
		First Named Inventor	James M. Tour		
		Art Unit	1711		
		Examiner Name	Unknown		
Sheet	4	of	10	Attorney Docket Number	11321-P069WOUS

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
/S.S./	21	Lourie et al., "Buckling and Collapse of Embedded Carbon Nanotubes", Phys. Rev. Lett. (1998) 81, pp. 1638-1641	
	22	Falvo et al., "Bending and Buckling of Carbon Nanotubes under Large Strain", Nature (1997) 389, pp. 582-584	
	23	Nardelli et al., "Mechanism of Strain Release in Carbon Nanotubes", Phys. Rev. B (1998) 57, pp. 4277-4280	
	24	Mitchell et al., "Dispersion of Functionalized Carbon Nanotubes in Polystyrene", Macromolecules (2002) 35, pp. 8825-8830	
	25	Strano et al., "Electronic Structure Control of Single-Walled Carbon Nanotube Functionalization", Science (2003) 301, pp. 1519-1522	
	26	Gong et al., "Surfactant-Assisted Processing of Carbon Nanotube/Polymer Composites", Chem Mater (2000) 12, pp. 1049-1052	
	27	Jin et al., "Dynamic Mechanical Behavior of Melt-Processed Multi-Walled Carbon Nanotube/Poly(Methyl Methacrylate) Composites", Chem Phys Lett (2001) 337, pp. 43-47	
	28	Zhao et al., "Stress Fields Around Defects and Fibers in a Polymer using Carbon Nanotubes as Sensors", Appl Phys Lett (2001) 78, pp. 1748-1750	
	29	Wood et al., "Carbon Nanotubes: From Molecular to Macroscopic Sensors," Phys Rev B (2000) 62, pp. 7571-7575	
/S.S./	30	Qian et al., "Load Transfer and Deformation Mechanisms in Carbon Nanotube- Polystyrene Composites", Appl Phys Lett (2000) 76, pp. 2868-2870	

Examiner Signature	/Satya Sastr/	Date Considered	07/09/2009
--------------------	---------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO:**

Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	10/561,712
				Filing Date	June 7, 2007
				First Named Inventor	James M. Tour
				Art Unit	1711
				Examiner Name	Unknown
Sheet	5	of	10	Attorney Docket Number	11321-P069WOUS

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
/S.S./	31	Curran et al., "Evolution and Evaluation of the Polymer Nanotube Composite," Synthetic Metals (1999) 103, pp. 2559-2562	
	32	Lourie et al., "Evidence of Stress Transfer and Formation of Fracture Clusters in Carbon Nanotube-Based Composites", Composites Science and Technology (1999) 59, pp. 975-977	
	33	Wagner et al., "Macrofragmentation and Microfragmentation Phenomena in Composite Materials", Composites Part A-Applied Science and Manufacturing (1999) 30, pp. 59-66	
	34	Garg et al., "Effect of Chemical Functionalization on the Mechanical Properties of Carbon Nanotubes", Chem Phys Lett (1998) 295, pp. 273-278	
	35	Curran et al., "A Composite from Poly(m-Phenylenevinylene-Co-2,5-Dioctoxy-P-Phenylenevinylene) ...", Adv Mater (1998) 10, pp. 1091	
	36	Lourie et al., "Evaluation of Young's Modulus of Carbon Nanotubes by Micro- Raman Spectroscopy", J Mater Res (1998) 13, pp. 2418-2422	
	37	Sinnott et al., "Mechanical Properties of Nanotubule Fibers and Composites Determined from Theoretical Calculations and Simulations," Carbon (1998) 36, pp. 1-9	
	38	Wagner et al., "Stress-Induced Fragmentation of Multiwall Carbon Nanotubes in a Polymer Matrix," Appl Phys Lett (1998) 72, pp. 188-190	
	39	Schadler et al., "Load Transfer in Carbon Nanotube Epoxy Composites", Appl Phys Lett (1998) 73, pp. 3842-3844	
/S.S./	40	Wood et al., "Orientation of Carbon Nanotubes in Polymers and its Detection by Raman Spectroscopy", Composites Part A-Applied Science and Manufacturing (2001) 32, pp. 391-399	

Examiner Signature	/Satya Sastri/	Date Considered	07/09/2009
--------------------	----------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>		Complete if Known			
		Application Number	10/561,712		
		Filing Date	June 7, 2007		
		First Named Inventor	James M. Tour		
		Art Unit	1711		
		Examiner Name	Unknown		
Sheet	6	of	10	Attorney Docket Number	11321-P069WOUS

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
/S.S./	41	Cooper et al., "Investigation into the Deformation of Carbon Nanotubes and their Composites through the Use of Raman Spectroscopy", Composites Part a-Applied Science and Manufacturing (2001) 32, pp. 401-411	
	42	Cooper et al., "Investigation of Structure/Property Relationships in Particulate Composites through the Use of Raman Spectroscopy," Journal of Raman Spectroscopy (1999), 30, pp. 929-938	
	43	Jin et al., "Nonlinear optical properties of some polymer/multi-walled carbon nanotube composites," Chem Phys Lett (2000) 318, pp. 505-510	
	44	Barraza et al., "SWNT-filled thermoplastic and elastomeric composites prepared by miniemulsion polymerization", Nano Letters (2002) 2, pp. 797-802	
	45	Dufresne et al., "Processing and characterization of carbon nanotube/poly(styrene-co-butyl acrylate) nanocomposites," J of Materials Science (2002), 37, pp. 3915-3923	
	46	Steuerman et al., "Interactions between conjugated polymers and single-walled carbon nanotubes," J of Physical Chemistry B (2002) 106, pp. 3124-3130	
	47	Kymakis et al., "Single-walled carbon nanotube-polymer composites: electrical, optical and structural investigation," Synthetic Metals (2002) 127, pp. 59-62	
	48	Wei et al., "Thermal expansion and diffusion coefficients of carbon nanotube-polymer composites," Nano Letters (2002) 2, pp. 647-650	
	49	Grady et al., "Nucleation of polypropylene crystallization by single-walled carbon nanotubes," J of Physical Chemistry B (2002) 106, pp. 5852-5858	
/S.S./	50	Alexandrou et al., "Polymer-nanotube composites: Burying nanotubes improves their field emission properties," Applied Physics Letters (2002) 80, pp. 1435-1437	

Examiner Signature	/Satya Sastri/	Date Considered	07/09/2009
--------------------	----------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	10/561,712
				Filing Date	June 7, 2007
				First Named Inventor	James M. Tour
				Art Unit	1711
				Examiner Name	Unknown
Sheet	7	of	10	Attorney Docket Number	11321-P069WOUS

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
/S.S./	51	Kumar et al., "Fibers from polypropylene/nano carbon fiber composites," Polymer (2002) 43, pp. 1701-1703	
	52	Liao et al., "Interfacial characteristics of a carbon nanotube-polystyrene composite system," Applied Physics Letters (2001) 79, pp. 4225-4227	
	53	Putz et al., "Elastic Modulus of Single - Walled Carbon Nanotube - PMMA Nanocomposites." J. Polym. Sci. Part B: Polym. Phys., (2004) 42, pp. 2286-2293	
	54	Benoit et al., "Transport properties of PMMA-carbon nanotubes composites," Synthetic Metals (2001) 121, pp. 1215-1216	
	55	Stephan et al., "Characterization of singlewalled carbon nanotubes-PMMA composites," Synthetic Metals (2000) 108, pp. 139-149	
	56	Frogley et al., "Mechanical properties of carbon nanoparticle-reinforced elastomers," Composites Science & Technol. (2003) 63, pp. 1647-1654	
	57	Ebbesen., " Annu. Rev. Mater. Sci. (1994) 24, pp. :235-264	
	58	Thess, et al., " Science (1996) 273, pp. 483-487	
	59	Vander Wal, et al., " Chem. Phys. Lett. (2001) 349, pp. 178-184	
/S.S./	60	Hafner et al., " Chem. Phys. Lett. 1998, 296, pp. 195-202	

Examiner Signature	/Satya Sastri/	Date Considered	07/09/2009
--------------------	----------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO:**
Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	10/561,712
				Filing Date	June 7, 2007
				First Named Inventor	James M. Tour
				Art Unit	1711
				Examiner Name	Unknown
Sheet	8	of	10	Attorney Docket Number	11321-P069WOUS

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
/S.S./	61	Cheng et al. Chem. Phys. Lett. (1998) 289, pp. 602-610	
	62	Nikolaev, et al. Chem. Phys. Lett. (1999) 313, pp. :91-97	
	63	O'Connell, et al. Science (2002) 297, pp. 593-596	
	64	Bachilo, et al. Science (2002) 298, pp. 2361-2366	
	65	Strano, et al. Science (2003) 301, pp. 1519-1522	
	66	Chiang, et al. J. Phys. Chem. B (2001) 105, pp. 1157-1161;	
	67	Chiang, et al. J. Phys. Chem. B (2001) 105, pp. :8297-8301	
	68	Liu, et al. Science (1998) 280, pp. 1253-1256	
	69	Gu, et al. Nano Lett. (2002) 2, pp. 1009-1013	
/S.S./	70	Bahr et al., "Highly Functionalized Carbon Nanotubes using in Situ Generated Diazonium Compounds," Chem Mater (2001) 13, pp. :3823	

Examiner Signature	/Satya Sastri/	Date Considered	07/09/2009
--------------------	----------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>		Complete if Known			
		Application Number	10/561,712		
		Filing Date	June 7, 2007		
		First Named Inventor	James M. Tour		
		Art Unit	1711		
		Examiner Name	Unknown		
Sheet	9	of	10	Attorney Docket Number	11321-P069WOUS

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
/S.S./	71	Bahr et al., "Functionalization of carbon nanotubes by Electrochemical Reduction of Aryl Diazonium Salts: A bucky paper electrode," JACS (2001) 123, pp. 6536-6542	
	72	Bahr et al., "Dissolution of small diameter single-wall carbon nanotubes in organic solvents?" Chemical Communications (2001) pp. 193-194	
	73	Ausman et al., "Organic Solvent Dispersions of Single-Walled Carbon Nanotubes: Toward Solution of Pristine Nanotubes," J. Phys. Chem. B (2000) 104, pp. 8911-8915	
	74	Bai et al., "Bulk Rigid-Rod Molecular Composites of Articulated Rod Copolymers with Thermoplastic pendants," J. Polym. Sci.:Part B: Polym. Phys. (1992) 30, pp. 1515-1525	
	75	Reich et al., "Tight-Binding Description of Graphene," Physical Review B (2002) 66	
	76	Girifalco et al., "Van der Waals binding energies in graphitic structures," Physical Review B (2002) 65	
	77	Girifalco et al., "Carbon nanotubes, buckyballs, ropes, and a universal graphitic potential," Physical Review B (2000) 62, pp. 13104-13110	
	78	Tanaka et al., "Solvent-free organic synthesis," Chemical Reviews (2000) 100, pp. 1025-1074	
	79	Dyke et al., "Solvent-Free Functionalization of Carbon Nanotubes," Journal of the American Chemical Society (2003) 125, pp. 1156-1157	
/S.S./	80	Dyke et al., "Unbundled and Highly Functionalized Carbon Nanotubes from Aqueous Reactions," Nano Letters (2003) 3, pp. 215-1218	

Examiner Signature	/Satya Sastri/	Date Considered	07/09/2009
--------------------	----------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>		Complete if Known			
		Application Number	10/561,712		
		Filing Date	June 7, 2007		
		First Named Inventor	James M. Tour		
		Art Unit	1711		
		Examiner Name	Unknown		
Sheet	10	of	10	Attorney Docket Number	11321-P069WOUS

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
/S.S./	81	Hudson et al., "Water Soluble, Exfoliated, Non-Roping Single Wall Carbon Nanotubes," J. Am. Chem. Soc. (2004) 126, pp. 11158-11159	
/S.S./	82	Yakabson et al., "High Strain Rate Fracture and C-chain Unraveling in Carbon Nanotubes," Computational Materials Science (1997) 8, pp. 341-348	
/S.S./	83	Wagner, H.D. "Nanotube-Polymer Adhesion: A Mechanics Approach," Chemical Physics Letters (2002) 361, pp. :57-61	
/S.S./	84	Fisher et al., "Effects of Nanotube Waviness on the Modulus of Nanotube-Reinforced Polymers," Applied Physics Letters (2002) 80, pp. 4647-4649	
/S.S./	85	Sano et al., "Ring Closure of Carbon Nanotubes," Science (2001) 293, pp. 1299-1301	

Examiner Signature	/Satya Sastri/	Date Considered	07/09/2009
--------------------	----------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.